

DISPOSITION OF PUBLIC COMMENTS

AC 25.307-X, *Proof of Structure*
Prepared by Todd Martin, ANM-115

No.	Comment	Requested Change	Disposition
Commenter: Dassault Aviation			
1.	AC text is not accurate.	§1.: Either delete the sentence “Section 25.307 contains the requirement for substantiation of structure for strength and deformation up to limit and ultimate load levels” or rephrase it as, for example “Section 25.307 contains the requirement for the proof of structure to the substantiation of section 25.305 Strength and deformation.” In fact the actual phrasing could be confusing as no requirement exists in 25.305 for the deformation at ultimate load.	FAA agrees the wording is not accurate. This sentence has been revised on the introduction page and in paragraph 1, as follows: “Section 25.307 requires structural testing to demonstrate compliance with the strength and deformation requirements of subpart C, unless structural analysis has been shown to be reliable.”
2.	§4.b.: It is written that amendment 25-23 of 25.307 adds paragraph (d) to require material correction factors for single load path structure substantiated by test <u>only</u> . To be remarked that 25.307 (d) does not reflect correctly this as the word “only” does not appear.	So the requirement text has to be modified to introduce the word only to be clear as: 25.307 (d) “When static or dynamic tests are only used to show compliance with the requirements of 25.305(b).…” In fact it is what is written in the AC §8.d.	We agree that the use of “only” in this sentence in the AC is not necessary, and so this word has been deleted. We do not think it is necessary to add “only” to the rule as recommended. There may be instances in which some testing is used to show compliance, but some analysis is also used.
3.	§6.c.: The last sentence could be modified to underline that analysis alone is not sufficient and substantiating data are based upon analysis but supported by tests (e.g., not tested load cases analysis supported by the comparison between tested ones analysis with tests results).	The proposed modification is “As compliance by test only is impractical in most cases, a large portion of substantiating data will be based on analysis <u>supported by tests.</u> ”	We do not think this change is necessary, because analysis “supported by tests” is referred to in the preceding sentence, as follows: “Compliance can be shown by analysis <u>supported by previous test evidence</u> , analysis <u>supported by new test evidence</u> , or by test only.”

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4.	§6.d.: The fact the load paths are well defined is a sine qua non condition to obtain reliable results. If it is not the case, whatever the formulas used for the analysis are will not guaranty the margin conservatism. Moreover the standard methods and formulas have been established based on tests of standard structures details, sub-components or components.	We propose to modify the first sentence as: “There are a number of standard engineering methods and formulas that are known to produce acceptable, often conservative results especially for structures where <u>on standard structure for which they have been established (at the condition that</u> the load paths are well defined).”	We agree that a well-defined load path is a sine qua non condition for use of standard engineering methods. We have revised the sentence to reflect that by removing the word “especially.”